How can we engage better with potential account users?

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Abstract
A better of understanding of potential uses and users of environmental-economic accounts is needed to ensure it is incorporated in into government decision making. While the System of Environmental-Economic Accounting (SEEA) was first available in 1993, following the Rio Earth Summit in 1992, and accounting concepts and practice have advanced significantly since then, the impact on public policy and decision making has at best been difficult to demonstrate. In this paper we examine the different possible uses of accounts and describe our recent attempts to better link account producers to account users in countries (e.g. Australia, Guatemala, the Philippines and Zambia). Based on this experience and drawing on the "10 Living Principles to Make Natural Capital Accounting Fit-for-policy" we outline a modular approach to engaging with government on the development and use of environmental-economic accounts. As part of this, we present classifications of (1) account uses and (2) account users, as well as some suggestions for ways to move potential users to actual users.

Outline

1. Introduction
2. Account uses and users
3. Case studies
– Australia
– Guatemala
– the Philippines
– Zambia
4. Conclusions and way forward
5. References

1. Introduction

It is now 25 years since the first version of what was to become the System of Environmental-Economic Accounting (SEEA) was available. At least sixty-nine countries have environmental accounting programs, although only 45 have regular funding for these programs (UNCEEA 2018). Less well known is how accounts have been used by governments, business, academics and others. Understanding how information in general is used by governments and others and specifically how environmental accounting can be used is an important area in need of investigation (Vardon et al. 2016).

To address this, the Policy Forum on Natural Capital Accounting for Better Decision Making[1] was formed. So far two fora have been held in the Netherlands and a third will occur in November 2018 in France. The proceedings of this have been published (see Vardon et al. 2017, Ruijs and Vardon 2018). The fora resulted in the "10 living principles to Make NCAs Fit for Policy" (Table 1) to help with the development and use of environmental accounts.

Table 1. The 10 Living Principles to Make NCAs Fit for Policy, grouped across four main areas

Comprehensive:		
1.	***Inclusive***	Acknowledging the diverse stakeholders concerned with decisions affecting natural capital, responding to their information demands, respecting different notions of value, and using appropriate means of engagement.
2.	***Collaborative***	Linking the producers of NCAs, the users of NCAs for policy analysis and the policy makers using the NCAs results, and building their mutual understanding, trust, and ability to work together.
3.	***Holistic***	Adopting a comprehensive, multi/interdisciplinary approach to the economic and environmental dimensions of natural capital and to their complex links with policy and practice.
Purposeful:		
4.	***Decision-centred***	Providing relevant and timely information for indicator development and policy analysis to improve and implement decisions with implications for natural capital.
5.	***Demand-led***	Providing information actually demanded or needed by decision makers at specific levels.
Trustworthy:		
6.	***Transparent and open***	Enabling and encouraging public access and use of NCAs, with clear communication of the results and their interpretation including limitations of the data sources, methods, and/or coverage.
7.	***Credible***	Compiling, assessing, and streamlining data from all available sources, and deploying objective and consistent science and methodologies.
Mainstreamed:		
8.	***Enduring***	With adequate, predictable resourcing over time; continuous application and availability; and building increasingly rich time series of data.
9.	***Continuously improving***	Learning focused, networked across practitioners and users, testing new approaches, and evolving systems to better manage uncertainty, embrace innovation, and take advantage of emerging opportunities.
10.	***Embedded***	NCA production and use becoming part of the machinery of government and business, building capacity, improving institutional integration for sustainable development, and incorporating NCAs use in procedures and decision-support mechanisms.

Source: After Bass et al. 2017.

A key part of the development and use of environmental accounts is the engagement between account producers and account users. So far most environmental accounting programs have been supply-led. That is, account producers have decided to produce accounts and then gone to possible account users, with either a proposal to produce accounts or a set of draft and final accounts.

For environmental accounting to play a greater role in government or business decision making, greater understanding and cooperation is needed between account producers and users. The remainder of this paper explores this issue and in particular explores practical ideas on how greater understanding and cooperation between account producers and users

[1] https://www.wavespartnership.org/en/policy-forum-natural-capital-accounting-better-decision-making

might occur. It does this by providing some examples from four countries with which we are familiar – Australia, Guatemala, the Philippines and Zambia – and finishes with some conclusions and suggestions on the way forward.

2. Account uses and users

The uses of accounts (or any information) can be described in a number of ways. For understanding uses by government in particular, the five stages of the policy cycle provide a useful reference. These are:

- Problem identification
- Development
- Implementation
- Monitoring
- Review

In this, it also needs to be recognised that are different types of account uses and users (Table 2). Information users can come from a diverse range of perspectives. While the focus on the policy cycle certainly makes government the central focus, the perspective of business, non-government organisations (NGOs), academics and individuals is also important. Indeed, it is the views and pressures from these groups which influence government decision-making.

Table 2. Uses and users of environmental accounts in public policy

	Information users		
Information uses	**Expert**	**Public policy and administration**	**Political**
Instrumental	Programme evaluation, predictive models	Target expenditure, monitor policy impacts	Policy decisions
Conceptual	Searching for new patterns in the dynamics of stock-changes and flows	Using environmental accounts with national accounts to support whole-of-government policy integration	Better understanding of the dependency of human wellbeing on natural capital and flows of ecosystem services
Tactical	Building the case for research	Ongoing analysis of the accounts and the significance of changes	Support and defend policies
Symbolic	Building the case for policy change	Environmental education	Make the case for major reforms
Political	Contributing to public policy debate	Advice and information to politicians to facilitate policy debate	Support election policies

Source: After Vardon et al. 2016.

Understanding between account producers and potential account users is usually poor. Many potential account users are usually looking for “instant” information to address the policy issue of the moment. If the accounts are not available now, or the accounts are ready but it is not clear how they should be interpreted, then they will be of little interest. While we can lament the modern phenomenon of the rapid news cycle and the quick succession

of issues raised and then forgotten, we can learn to anticipate information needs and have interpretations of accounts (and other data) on hand and ready to inject into discussions.

The anticipation of the information needs by account producers is generally good. Accounts are often on hand to assist. However, a key issue is that because governments, media and analysists are not familiar with the accounts, understanding and interpreting them is a key challenge. Official government statistical agencies are generally reluctant to undertake this task and will usually only describe the data and major changes, without going the next step and analysing the implications of these and provide policy advice or management options. Here the academic, business and NGO communities as well as the media have important roles in convincing government decision-making bodies that they can benefit from the information contained in environmental accounts as well as the concepts that underpin environmental accounting.

Such activity has taken place to a greater and lesser extent in most countries producing environmental accounts, but demonstrable use of accounts is still the exception rather than the norm.

3. Case studies

This section looks at how accounts producers and users have engaged as well as how environmental accounts are being used, or planned to be used, in countries. The countries examined are:

- Australia
- Guatemala
- The Philippines
- Zambia

These examples were chosen because of our familiarity with the countries. Other countries, for example, The Netherlands, United Kingdom, Canada and Sweden, have also had experience worth noting and is referred to but not outlined in detail here (e.g. Ruijs and Vardon 2018).

3.1 Australia

In Australia, engagement between environmental account producers and user has occurred over many years. Historically this was initiated by the Australian Bureau of Statistics (ABS) as a producer of environmental accounts and statistics, and for this purpose had annual meetings of an Environment Statistics User Group as well as meetings with environment agencies, such as the various incarnations of the national environment department as well as the National Water Commission, with which the 2nd Edition of the Water Account, Australia 2004-05 was co-published[2]. This engagement had modest success and was mostly focused on details of production, data quality including data access and timeliness of results (i.e. making the accounts available as soon as possible after the reference period). The

[2] http://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/6F380840F971B08DCA2577E700158A5E?opendocument

hosting of the "Completing the Picture" conference in 2012[3], use of the accounts in modelling (e.g. Wittwere 2012) and engagement with Australian National University (ANU), with which the ABS now conducts an annual course[4], are notable achievements.

Others, and notably the Wentworth Group of Concerned Scientists[5] and state governments (e.g. New South Wales and Victoria), have also played significant roles with engagement between the producers and users of accounts. In particular, the Wentworth Group was able to very effectively engage with academics in the production of accounts as well as government departments and politicians in the application of accounts. For example, in November 2016 the Wentworth Group organised a presentation to the Meeting of Commonwealth, State and Territory Environment Ministers. The statement of the Environment Ministers emerging from the meeting said:

> *"Ministers agreed to work together to develop a common national approach to environmental accounts in 2017. This important work will ensure accurate and reliable information is available to governments, communities and business to better understand the condition of the environment and make better decisions. It will improve the ability to track outcomes in specific locations and across state and territory boundaries, and demonstrate the value of the environment to our standard of living."* [6]

This led directly led to development of a National Strategy for Environmental-Economic Accounting that was released earlier this year (2018)[7]. As part of this the Department of Environment and Energy held a number of meetings and a national workshop in August 2017 to assist with the development of the strategy.

Overall the media attention given to the accounts has been limited. However, one popular economics commentator, Ross Gittins, has written about the accounts (e.g. Gittins 2012, Gittins 2018), while one of us (Michael Vardon) has, with other authors, been able to have articles published in a daily news site (see Keith et al. 2017a, Vardon and Burnett 2015, Vardon and Burnett 2016, Vardon 2017, Vardon 2018). These popular articles have been read by a far greater audience than any of the accounts or related papers or publications.

A key thing emerging from the work in Australia is that accounts addressing topical issues have received great support and interest. Because of the nature of the climate and geography of Australia, the availability of water changes from place-to-place and year-to-year. As such, the annual water accounts produced by the ABS are a key product. In this the availability of subnational data (at the state level) is of great importance. In addition, particular places are also of interest and accounts for the Great Barrier Reef Region (ABS 2017) and a Central Highlands of Victoria (Keith et al 2017b) have both attracted considerable interest. The production of the accounts for the Central Highlands has

[3] http://www.abs.gov.au/ausstats/abs@.nsf/mf/4628.0.55.001
[4] http://www.fennerschool.anu.edu.au/education/short-courses/introduction-environmental-accounting
[5] http://wentworthgroup.org/
[6] http://www.environment.gov.au/system/files/pages/4f59b654-53aa-43df-b9d1-b21f9caa500c/files/mem-meeting5-statement.pdf
[7] http://www.environment.gov.au/science/environmental-economic-accounting

contributed to the on-going debate about the use of the area in the media and for some of the authors of the accounts to be invited to roundtable discussions on the long-term management of the area.

Table 3 uses the classification of accounts uses and users to classify the various accounting documents produced in Australia over the past 20 or so years. It is recognised that not every account has been included in Table 3 and it should be understood that the table is intended as a representative sample accounts and their uses and users.

Table 3. Uses and users of environmental accounts in Australia

	Information users		
Information uses	**Expert**	**Public policy and administration**	**Political**
Instrumental	Australian Regional Environmental Accounts Trial (10 regions)[8] Accounts for the Central Highlands Region[9] Accounts for the Great Barrier Reef Region Water Account, Australia National Water Account	Accounting for Nature[10] Water Account, Australia National Water Account	Accounts for the Central Highlands[9] Accounting for Nature[10]
Conceptual	Water Account, Australia Accounting for Nature[10] Draft Protocol for Constructing a Native Vegetation Condition Account[11]	Development of the Nation Strategy for Environment-Economic Accounting	Accounting for Nature[10]
Tactical	Accounts for the Central Highlands		Accounting for Nature[10]
Symbolic	Accounts for the Central Highlands	Accounts for the Central Highlands	Accounts for the Central Highlands Accounting for Nature[10]
Political	Accounts for the Central Highlands	Accounts for the Central Highlands	

Table 3 shows that most of the work by government agencies, is in the instrumental and conceptual uses, while the work by academics and NGOs extends into tactical, symbolic and political uses. Government statistical offices in particular are there to inform, not to interpret or make recommendations about policy or management. Academics and NGOs are, on the hand, wanting to take the available information and use it to assess current management or policy and examine, for example, if there are better alternatives. This will often then extend to advocating for change, a role that statistical offices and most government agencies, do not play.

[8] http://wentworthgroup.org/regional-environmental-accounts/
[9] Keith et al. 2017b
[10] http://wentworthgroup.org/2016/12/accounting-for-nature-2016/2016/
[11] http://wentworthgroup.org/2015/11/draft-protocol-for-constructing-a-native-vegetation-condition-account/2015/

3.2 Guatemala

In this section, we present key lessons from the implementation of natural capital accounting in Guatemala. The lessons span producing and using the accounts as well as embedding them in the policy context. In addition, the influence of the accounts on the overall policy dialogue and in different stages of the policy cycle is assessed. The experience in Guatemala could be useful for other developing countries, in particular those like Guatemala that have low levels of public resources, weak institutions, and very limited basic statistics (particularly environmental statistics).

Guatemala began developing NCA in 2005 with the publication of a feasibility study that triggered a discussion, which in turn lead to the preparation of a project that was later funded by the Dutch. Two sets of accounts have been produced, a first iteration covering 2001 to 2006, and then a revised iteration for 2001 to 10. A full list and links to all account publications is found in Castaneda et al (2017).

The accounts produced were for water, energy and emissions, forest, land and ecosystems, fisheries and aquaculture, minerals, and waste as well as a detailed analysis of environmental expenditures and transactions for the central state and municipal governments. The accounts showed supply and use by 130 sectors of the economy.

A particular feature of the accounts was that they were produced jointly by the government and Rafael Landivar University. Guatemala has a history of collaboration among government agencies and academic institutions. This helps overcome the challenge of limited resources and low capacity. For example, Rafael Landivar University has a long tradition of participating in the design of household surveys that are part of the recurrent statistical operations of Institute of National Statistics (INE). Also, many agencies, such as the forest agency, Central Bank (BCG), and INE have representatives on the boards of universities.

The accounts have been used in a number of ways and having the accounts was a key starting point for engaging with potential uses. The water accounts helped to foster dialogue across sectors and is also informing research. For example, a study led by the Guatemalan Municipality looked at the intensity of water use in metropolitan areas. The detailed information in the water accounts is helping municipalities prepare their long-term goals for water security. In addition, water demand is linked to models that link hydrology with predicted water demand and the effects of different land uses and climate change on water availability. A complementary study indicated that restoring natural forests in the water recharge areas around Guatemala City could help increase resilience to climate change, slowing down runoff, and improving infiltration into the soil and groundwater.

Alongside this research and analysis, a policy that manages extraction permits that aims to match the supply and demand of water and prevent conflict was investigated. The study included some measures of households' willingness to pay for conservation and reforestation of these. The Metropolitan Water Conservation Fund Area (FONCAGUA) emerged from this dialogue, bringing together local authorities, the municipal water company, civil society, nongovernmental organizations (NGOs), and other stakeholders.

Table 4. Uses and users of environmental accounts in public policy in Guatemala

	Information users		
Information uses	**Expert**	**Public policy and administration**	**Political**
Instrumental	General Equilibrium Models and Input Output Analysis have been used to understand the impacts of forest use in the forest assets in Guatemala.	Data from the accounts, more specifically the gap between an estimated depreciation of forest resources vs investments in the public to curb deforestation, lead to increased dialogue and ultimately increased funding allocations for the forest institute.	Forest policy was influenced by the accounts, especially the illegal logging strategy.
Conceptual	New patterns in the dynamics of stock-changes and flows were revealed, particularly related to the reduced stock of carbon in the ecosystem accounts.	Connection of the accounts to national accounts made obvious the inefficiencies of the system.	Better understanding of the interactions between the environment and the economy.
Tactical	As the accounts were used to publish the "State of the Environment reports" for many years, these helped build the case for more research on the linkages between the economy and the environment.	As time series are developed, the public is informed of the dynamics, particularly of the forest sector.	Useful to prove the case of the need of more resources in the forest sector.
Symbolic	Building the case for policy change	The connection with Academic helped embed the need of examining the economic implication of environmental degradation in the University curricula.	The inclusion of a chapter on fiscal policy in the "State of the Environment" report lead to an overall debate on the need for strategies to understand environmental fiscal policy.
Political	Policy briefs and notes from the accounts were used to reach a broader agenda a public.	The team constructing the accounts became defacto a source for environmental economics issues.	Support election policies

Source: JP Castaneda based on interviews to Carrera, J.L.

As well as water, data from the accounts were used to model the relations among deforestation, fuelwood, and energy security in the long term, and the results became headline news (Banerjee et al. 2017). In response, a proposal presented to congress asked for a new public/private strategy for the sustainable production and efficient use of natural resources, including fuelwood and soils. The strategy combines policies and incentives for forest protection, rehabilitation, and reforestation, with the intention to create over 20,000 direct and 60,000 indirect jobs and ensuring fuelwood as well as timber supply for small and medium industry.

For engagement with accounts users, the public-academic partnerships added credibility and rigor to the work and enabled a broader range of publications to be produced. In

addition, the analysis, modelling and recommendations that were based on the accounts went well beyond what is done statistical agencies and most government agencies producing accounts. This in turn led to media coverage and public discussion.

The Guatemalan case shows that the formalization and institutionalization to both produce and use accounts is gradual process and that the starting point is not necessarily in the public sphere. Bringing together technical and financial capabilities from non-government institutions can enrich the process and give accounting more credibility at the national level, especially when it is intended for the findings to influence the policy cycle.

Although there are problems, the experience from Guatemala shows that innovative institutional arrangements, including partnerships with academic institutions, can overcome resource constraints and provide credibility and rigor to the information used in the policy dialogue. This in turn sets the stage for a cultural shift in terms of data-driven decision making.

3.3 The Philippines

The Philippines has a long history with natural capital accounting, starting in the 1990's. However, these early achievements were not sustained when external funding ceased, even though there were substantial efforts to institutionalize NCA. The Department of Environment and Natural Resources (DENR) has noted this was due to a lack of appreciation of NCA and its usefulness in environmental and resource management in government agencies. As such they did not have incentives to include NCA funding in their budget requests. Therefore, it is important that policy use of NCA is made clearer and that capacity within government agencies to appreciate, understand and undertake NCA is enhanced. It has also been pointed out that capacity building must go beyond familiarization of the accounts for NCA to gain traction both with producers and users. Another finding in the Philippines has been that the usefulness of the ecosystem accounts in policymaking and resource management is easier to understand by environmental managers at the subnational level, than natural capital accounts at the national level by central economic agencies.

NCA is now being institutionalized in the Philippines. Units for producing and using NCA has been set up within the Philippine Statistical Agency as well as the DENR. A number of other agencies are involved in both developing and using the accounts. In particular, the development of ecosystem accounts has been a multi-agency, multidisciplinary effort. This process meant that it took a lot of time and effort to develop the first iteration of the accounts, but it also brought widespread awareness of the results, as well as of NCA as a policy and management tool.

A key part of the institutionalisation was the development of the processes and allocation of responsibilities for the development and use of accounts. The National Economic Development Authority (NEDA) has the overall policy and coordination role for NCA and the DENR (the Policy and Planning Office plus a large number of other agencies and units within the DENR) supports the development of accounts as well as using it for policy analysis.

This arrangement has considerably increased policy uptake of NCA. In particular, NCA was included in the chapter on ecological integrity in the Philippine Development Plan 2017-2022. The ecosystem accounting for the Laguna de Bay basin has been found helpful in identifying key policy needs, impacts, and areas where policy interventions should be prioritized. In contrast to previous fragmented datasets and analyses, the ecosystem accounting provided a comprehensive overview of the ecosystem and its interactions with the economy. The accounts have informed a number of policies:

- Land Cover/Land use accounts helped initiate a review of the inconsistencies of the implementation of land use policies of the Department of Environment and Natural Resources (DENR), Department of Agriculture (DA), and Department of Agrarian Reform
- The ecosystem service accounts on soil erosion control and flood control in the Laguna de Bay basin are being used as basis for developing a scorecard for local government unit
- The ecosystem service account on fisheries, particularly on the estimates of resource rent, is being considered in revising the licensing and permit fees for aquaculture in the Laguna de Bay basin
- The ecosystem condition accounts, particularly water quality and sedimentation is contributing to the review of the issuance of Environmental Compliance Certificates (ECCs) and the conduct of Environmental Impact Assessment (EIA), and in the proposed revision of the EIA Law
- Review of issuance of permits for new plantations of oil palm in Southern Palawan in view of the findings of ecosystem accounting that current plantations are competing for irrigation water for paddy production, yet the yield of oil palm in the area is low compared with other countries in SEA
- The DENR management has stressed the importance of ecosystems accounting in monetary terms, so much so that the Department has included ecosystem valuation as one program thrust that will be allocated funding by year 2018, and the process of integration has commenced with will begin implementation in 2017

Some of the enabling factors identified were to engage with key agencies at the start and define relevant issues and agency priorities through early dialogues, as well as setting targets and define outputs and expected outcomes at the outset. Moreover, a communication strategy for the accounts was developed early on, including the specification of a range communication products such as policy briefs, videos, national workshops and multiple stakeholder consultations. These events received considerable attention in national and local media.

Members of academia were also involved the development of NCA. As academics (e.g. professors and postgraduate students) gain knowledge about NCA, this in turn sparks interest to include NCA in the curriculum, which contributes to developing and sustaining NCA capacity in the longer term.

3.4 Zambia

Zambia started to develop accounts in 2017, as a Core Implementing Country of the WAVES (Wealth Accounting and the Valuation of Ecosystem Services) program. There is significant high-level buy-in of the Government of the Republic of Zambia, which has been crucial to the rapid progress of the program. As is standard in WAVES country programs, a high-level steering committee was set up, led by the Ministry of Development Planning and involving all relevant ministries.

Zambia began by developing land, water and forest accounts, as these could inform important policy issues like land use, deforestation, water allocation and diversification of the economy. Zambia is also developing an environmental-economic model in parallel to the accounts, to be readily available as a policy tool as soon as data from the accounts are available. An important feature of this model will be the ability to link it to the macroeconomic model used at the Ministry of Finance.

The power of framing environment-related issues in natural capital terms has been evident in Zambia. It is also clear that compiling information in a common framework creates a stronger message than comparing disparate data on the same issues. While Zambia has only just embarked on developing NCA, this has already created significant interest at the highest levels of government, such as the Cabinet, Parliament, the Committee of Permanent Secretaries and others. The government of Zambia wants to quickly institutionalize the production and use of natural capital accounts, and to that end they have involved a large number of government ministries and agencies in the technical working groups. In addition, there has already been discussions around developing university courses on natural capital accounting and valuation of ecosystem services.

In terms of informing policy, some policy-relevant results have already been elicited from the accounts, particularly for water management and its relationship to climate change mitigation and adaptation. This potential use of the water accounts emerged when a draft set of accounts was prepared and circulated for comment, accompanied by the production team also arranging meetings with various potential users.

The draft water accounts, prepared by a team led by Department of Water Affairs, showed that the largest user of water is electricity generation via hydropower. This is a positive story for climate change mitigation. However, there is also a risk that changes to the level and pattern of rainfall will lower the risk of hydroelectric power generation. The water accounts can be used to help assess the allocation and pricing of water to ensure that there is enough water to meet power demands as well as economic uses (e.g. agricultural production).

Another issue identified from broader consultations on the accounts was how they could inform Zambia's 7th National Development Plan[12]. In particular, one avenue identified for diversifying the economy is to further develop nature-based tourism. To this end, tourism accounts have been added to the NCA work plan. This will include measuring the current contribution of national parks to the economy and estimating the potential for developing the tourism sector, as well opening up new nature areas for tourism. This immediate link of policy planning to development of accounts ensures that the accounts developed are relevant and useful, and also helps in focusing the efforts; some part of the accounts will need to have high accuracy and for some others a ballpark estimate may be sufficient.

4. Conclusions and way forward

The four case studies all highlight the importance of having accounts to show potential users, as well as having thought about how they could be applied to issues of interest to the

[12] http://www.mndp.gov.zm/download/7NDP.pdf

potential users. In this, the accounts *per se* are not the main focus of discussion, but rather it is the summary graphics or key findings clearly linked how they inform current issues. This is because almost all potential users are unfamiliar with accounts and few have the time or inclination to take the time to become familiar with them. This does not mean that contact with potential users only starts after you have accounts.

In all cases, potential users were contacted prior to account production. Interest at this stage varies greatly with a range of potential responses: from scepticism that accounts can help or even be produced to strong enthusiasm. The latter often reflects a pressing issue for which little data is available and hence managers and decision-makers are looking for anything that can help. This can be problem as expectations can be raised and users often expect to see the accounts very quickly – within a month or even a week. Such expectations need to be carefully managed.

This does however raise the important issue of timeliness. In general, the time taken from the beginning of a consultation process on account production to the delivery of a set of accounts has taken more than a year and often up to 3 or 4 years. In the case of the latter, those that were originally contacted have long since forgotten the initial consultation and in many cases staff have change positions or left agencies. To address this, it is suggested that a draft set of accounts is circulated for consultation within 6-9 months of initial contact, with a view to having a published draft of the accounts within a year. This will mean that the accounts are not perfect, but it will enable users to see that they can be produced as well as assist them in understanding how they can be used. It also helps to determine where additional effort is needed (e.g. a more detailed industry break down, additional accounts or other data needed to help make sense of the accounts already produced, etc).

The case studies also highlight the different approaches to the guidance of projects and the involvement of non-government agencies. In the case of the Philippines, Guatemala and Zambia, high level steering committees were established that included key central agencies of government. Guatemala and Australia both have good engagement between the academic sector and the government, and this is being actively developed in Zambia and the Philippines. The link to economic modelling in Guatemala and Australia has been an important link between accounting data and government policy and management, and again this is being progressed in Zambia.

Finally, an important factor is to identify users and uses of the accounts early on. This can be units at the Ministry of Planning, Ministry of Finance, ministries for particular industries (e.g. agriculture), or other government agencies that focuses on policy analysis. It can also be useful for setting up communication strategies to improve the chances of more immediate use by policy makers. This can include identifying policy-relevant indicators derived from the accounts and producing these regularly. It can also include setting up advisory boards with potential users as members, and holding stakeholder consultations and sensitization workshops to build knowledge about the accounts in the wider community. Linking to academia has also proven to be fruitful, as well as including courses on NCA and related policy tools in university programs.

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